

AN/APX-113(V) and AN/APX-125(V)

Combined interrogator/transponder

F-16 configuration



AN/APX-113(V) and AN/APX-125(V) CIT systems have identical form factors

The AN/APX-113(V) and AN/APX-125(V) combined interrogator/transponder (CIT) are versatile Identification Friend or Foe (IFF) systems specifically developed for the F-16 Falcon. These systems are legacy and have been replaced by the AN/APX-126.

The AN/APX-113(V) is currently used for the Block 15 A/B MLU, Block 20 A/B, Block 30/32, Block 40, Block 50/52 C/D, and Block 60 aircraft. The system's versatility is demonstrated by other applications that include anti-submarine warfare and surveillance helicopters, aerostats, Mig-29s, Japan's F-2 fighter, and other international platforms. The AN/APX-113(V) and AN/APX-125(V) includes Mode S elementary and enhanced surveillance (ELS and EHS) transponder capabilities. The AN/APX-125(V) includes Mode 5 interrogator and transponder capabilities.

Features and benefits

- Complete Mark XII or Mark XIIA identification system in one unit
- DoD AIMS 97-1000 and 03-1000A certified STANAG 4193-compliant
- Compliant with AIMS 03-1000B
- Compliant with ADS-B Out (DO-260B) via 1090 MHz ES
- Includes Mode S, Level 2 (ELS and EHS) in accordance with DO-181E
- Utilizes KIV-78 cryptographic computer
- Multiple antenna configurations (electronic or mechanical scan)
- Dual-redundant MIL-STD-1553 bus interface

| CIT | Mark XII | Mode 5 | Mode S Transponder |
|---------------|----------|--------------|--------------------|
| AN/APX-113(V) | ✓ | Upgradeable* | ✓ |
| AN/APX-125(V) | ✓ | ✓ | ✓ |

*-5X CIT LRU and up

Specifications

| | | |
|------------------------------|---|--|
| Unit | Combined interrogator/transponder Beam-forming network Fuselage-mounted antenna elements Lower interrogator antenna | |
| Interrogator subsystem | Detection range Sector coverage Azimuth accuracy Range accuracy and resolution In-beam targets Modes | >100 nmi ±60 degrees AZ, ±60 degrees EL ±2 degrees <500 feet (152 meters) 32 1, 2, 3/A, C and 5 |
| Interrogator antenna | Number of antenna elements Lower antenna | 4 Conformal |
| Interrogator unique features | Front-panel transmit Front-panel receive Monopulse receive, AJ protection, Mode C | 2.4 kilowatts minimum -85 dBm typical altitude report, reply evaluation and degarbling |
| Dimensions and weight | CIT: BFN: FMA: LIA: | 8.26" height x 6.00" width x 14.50" depth, 32 pounds 6.50" height x 8.38" width x 4.00" depth, 10 pounds 1.55" height x 3.25" width x 13.10" depth, 0.5 pounds 0.60" height x 17.00" width x 14.00" length, 10 pounds |
| Transponder subsystem | Front-panel transmit Front-panel receive Modes | 500 watts -76 dBm 1, 2, 3/A, C, S and 5 |
| System parameters | MTBF System CIT only MTTR Fault detection Fault isolation Prime power Voltage Consumption Forced-air cooling Integral fan | 2,000 hours 2,400 hours 0.25 hours 97 percent 99 percent 28 Vdc 200 watts CIT unit only Optional |

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